

**MINOR SOURCE OPERATING PERMIT  
OFFICE OF AIR MANAGEMENT  
and  
INDIANAPOLIS ENVIRONMENTAL RESOURCES  
MANAGEMENT DIVISION**

**R&S Plating, Inc.  
2302 Bloyd Ave.  
Indianapolis, Indiana 46218**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 097-11695-00325	
Issued by: Mona A. Salem Chief Operationg Officer Department of Public Works City of Indianapolis	Issuance Date:

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and the City of Indianapolis Environmental Resources Management Division (ERMD). The information describing the source contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary hard chrome plating process.

Authorized Individual: J. Michael Raymond  
Source Address: 2302 Bloyd Ave., Indianapolis, IN 46218  
Mailing Address: 2302 Bloyd Ave., Indianapolis, IN 46218  
Phone Number: (317) 925-4939  
SIC Code: 3471  
County Location: Marion  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source Operating Permit

### A.2 Emissions units and Pollution Control Equipment Summary

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This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 17,640,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #1, equipped with a packed-bed scrubber/mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;
- (b) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 23,520,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #2, equipped with a packed-bed scrubber/mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;
- (c) One (1) cold cleaner degreaser, utilizing one (1) gallon of mineral spirits a year, without a remote solvent reservoir, identified as Mineral Spirits;
- (d) One (1) cold cleaner degreaser, utilizing 70 gallons of MEK (2-Butanone) a year, without a remote solvent reservoir, identified as MEK;
- (e) Three (3) natural gas fueled space heaters, with a combined maximum heat input rate of 0.29 million Btu per hour, exhausting to stacks 9, 10, and 8, and identified as Space Heaters;
- (f) One (1) natural gas fueled parts bake oven, with a maximum heat input rate of 0.02 million Btu per hour, identified as Parts Bake Oven;
- (g) One natural gas fueled burner, with a maximum heat input rate of 0.02 million Btu per hour, identified as Burner.

## **SECTION B                      GENERAL CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### **B.1            Permit No Defense [IC 13]**

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This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2            Definitions**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### **B.3            Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

### **B.4            Modification to Permit [326 IAC 2]**

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All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of any regulated pollutant is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM and ERMD prior to making the change.

### C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. IDEM, OAM, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division

2700 South Belmont Avenue  
Indianapolis, Indiana 46221

Any such application should be certified by the “authorized individual” as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, and ERMD, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch and ERMD, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM, and ERMD shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.

- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and ERMD, the fact that continuance of this permit is not consistent with purposes of this article.

**C.7 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.

**Testing Requirements**

**C.8 Performance Testing [326 IAC 3-6]**

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM and ERMD.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.



- (b) All test reports must be received by IDEM, OAM and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, and ERMD if the source submits to IDEM, OAM and ERMD, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

### **Compliance Monitoring Requirements**

#### **C.9 Compliance Monitoring [326 IAC 2-1.1-11]**

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

#### **C.10 Monitoring Methods [326 IAC 3]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

#### **C.11 Actions Related to Noncompliance Demonstrated by a Stack Test**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM and ERMD, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM and ERMD shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and ERMD within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and ERMD reserve the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and ERMD that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM and ERMD may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

### **Record Keeping and Reporting Requirements**

#### **C.12 Malfunctions Report [326 IAC 1-6-2]**

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3)

years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Environmental Resources Management Divisions (ERMD) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM and ERMD, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.13 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, and ERMD or a representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written

request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.

- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-Annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management

100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) A malfunction as described in 326 IAC 1-6-2; or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

**C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

- (a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will

achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

and

Environmental Resources Management Division  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### **Facility Description [326 IAC 2-7-5(15)]: Chromium Electroplating Operations**

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

- (a) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 17,640,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #1, equipped with a packed-bed scrubber/composite mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;
- (b) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 23,520,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #2, equipped with a packed-bed scrubber/composite mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;

### **Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

#### D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart N. The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks HC #1 and HC #2.

#### D.1.2 Chromium Electroplating and Anodizing NESHAP [326 IAC 20-8-1] [40 CFR Part 63, Subpart N]

The provisions of 40 CFR 63, Subpart N - National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, which are incorporated by reference as 326 IAC 20-8-1, apply to tanks HC #1 and HC #2. A copy of this rule is attached. The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks HC #1 and HC #2.

#### D.1.3 Chromium Emissions Limitation [40 CFR 63.342(c)] [40 CFR 63.343(a)(1)&(2)][326 IAC 20-8-1]

- (a) The emission limitations in this condition apply only during tank operation, and also apply during periods of startup and shutdown as these are routine occurrences for tanks subject to 326 IAC 20-8-1. The emission limitations do not apply during periods of malfunction.
- (b) The hard chromium electroplating tanks, identified as tanks HC #1 and HC #2 above, are considered a small, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the hard chromium electroplating tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm [ $1.3 \times 10^{-5}$  gr/dscf].

#### D.1.4 Work Practice Standards [40 CFR 63.342(f)] [326 IAC 20-8-1]

The following work practice standards apply to tanks HC #1 and HC #2:

- (a) At all times, including periods of startup, shutdown, malfunction and excess emissions, the Permittee shall operate and maintain tanks HC #1 and HC #2, including the packed-bed scrubber/composite mesh-pad system and foam blanket-type fume suppressant, composite mesh-pad, and monitoring equipment, in a manner consistent with good air

pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.6.

- (b) Malfunctions and excess emissions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.6.
- (c) These operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in this section.
- (d) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to IDEM, OAM and ERMD, which may include, but is not limited to, monitoring results; review of the OMP, procedures, and records; and inspection of the source.
- (e) Based on the results of a determination made under paragraph (d) of this condition, IDEM, OAM and ERMD may require that the Permittee make changes to the OMP required by Condition D.1.6. Revisions may be required if IDEM, OAM and ERMD finds that the plan:
  - (1) Does not address a malfunction or period of excess emissions that has occurred;
  - (2) Fails to provide for the operation of tanks HC #1 and HC #2, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, and process monitoring equipment during a malfunction or period of excess emissions in a manner consistent with good air pollution control practices; or
  - (3) Does not provide adequate procedures for correcting malfunctioning process equipment, packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, monitoring equipment or other causes of excess emissions as quickly as practicable.

The work practice standards that address operation and maintenance must be followed during malfunctions and periods of excess emissions.

#### D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B-Preventive Maintenance Plan, of this permit, is required for the tanks HC #1 and HC #2 and the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, and composite mesh-pad.

#### D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)] [326 IAC 20-8-1]

- (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than the startup date of tanks HC #1 and HC #2. The OMP shall specify the operation and maintenance criteria for the tanks, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad and monitoring equipment and shall include the following elements:
  - (1) For the packed-bed scrubber/composite mesh-pad system (PBS/CMP):
    - (A) Quarterly visual inspections of the device to ensure there is proper

drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.

- (B) Quarterly visual inspection of the back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.
  - (C) Quarterly visual inspection of the duct work from the tank to the control device to ensure there are no leaks.
  - (D) Perform washdown of the composite mesh-pads in accordance with manufacturers recommendations.
- (2) A standardized checklist to document the operation and maintenance criteria for tanks HC #1 and HC #2, the air pollution control technique, packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, and the monitoring equipment.
  - (3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions or periods of excess emissions as indicated by monitoring data do not occur.
  - (4) A systematic procedure for identifying malfunctions and periods of excess emissions of tanks HC #1 and HC #2, the air pollution control device, the add-on air pollution control device and monitoring equipment; and for implementing corrective actions to address such malfunctions and periods of excess emissions.
- (b) The Permittee may use applicable standard operating procedures (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans such as the PMP required in Condition D.1.5, as the OMP, provided the alternative plans meet the above listed criteria in Condition D.1.6(a).
  - (c) If the OMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction or period of excess emissions at the time the plan is initially developed, the Permittee shall revise the OMP within forty-five (45) days after such an event occurs. The revised plan shall include procedures for operating and maintaining tanks HC #1 and HC #2, the air pollution control device, the add-on air pollution control device and the monitoring equipment, during similar malfunction or period of excess emissions events, and a program for corrective action for such events.
  - (d) If actions taken by the Permittee during periods of malfunction or period of excess emissions are inconsistent with the procedures specified in the OMP, the Permittee shall record the actions taken for that event and shall report by phone such actions within two (2) working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the Permittee makes alternative reporting arrangements, in advance, with IDEM, OAM and ERMD.
  - (e) The Permittee shall keep the written OMP on record after it is developed to be made available, upon request, by IDEM, OAM and ERMD for the life of tanks HC #1 and HC #2 or until the tank is no longer subject to the provisions of 40 CFR 63.340. In addition, if the OMP is revised, the Permittee shall keep previous versions of the OMPs on record to be made available for inspection, upon request by IDEM, OAM and ERMD for a period of five (5) years after each revision to the plan.



### **Compliance Determination Requirements [326 IAC 2-1.1-11]**

#### **D.1.7 Performance Testing [326 IAC 2-1.1-11] [40 CFR 63.343(b)(2)] [40 CFR 63.7] [40 CFR 63.344] [326 IAC 20-8-1]**

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- (a) A performance test demonstrating initial compliance for tanks HC #1 and HC #2 was performed on May 19, 1997. During the initial performance test, it was determined that the average overall pressure drop across the composite mesh pad system was 3.0 +1 inches of water for HC #1 and 4.5 +1 inches of water for HC #2 and the average outlet chromium concentration is 0.00239 mg/dscm.
- (b) The Permittee is not required to further test tanks HC #1 and HC #2 by this permit. However, the IDEM may require testing when necessary to determine if the tanks are in compliance. If testing is required by the IDEM, compliance with the limit specified in Condition D.1.3 shall be determined by a performance test conducted in accordance with 40 CFR 63.344 and Section C.8 Performance Testing.
- (c) Any change, modification, or reconstruction of the tanks HC #1 and HC #2, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, or monitoring equipment may require additional performance testing conducted in accordance with 40 CFR 63.344 and Section C.8 Performance Testing.

### **Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

#### **D.1.8 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)] [326 IAC 20-8-1]**

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- (a) Pursuant to 40 CFR 63.343(c)(3) and 63.343(c)(1)(ii), when using a packed bed scrubber in conjunction with a composite mesh-pad system to comply with the limit specified in Condition D.1.3, the Permittee shall monitor and record the pressure drop across the composite mesh-pad system during tank operation once each day that the hard chromium electroplating tank is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within 3.0 ±1 inchs of water column of the pressure drop value for HC #1, and within 4.5 ±1 inchs of water column of the pressure drop value for HC #2, as established during the initial performance test.
- (b) Tank operation or operating time is defined as that time when a part is in the tank and the rectifier is turned on. If the amount of time that no part is in the tank is fifteen minutes or longer, that time is not considered operating time. Likewise, if the amount of time between placing parts in the tank (i.e., when no part is in the tank) is less than fifteen minutes, that time between plating the two parts is considered operating time.

### **Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)] [326 IAC 2-8-5(3)]**

#### **D.1.9 Record Keeping Requirements [40 CFR 63.346] [326 IAC 20-8-1]**

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The Permittee shall maintain records to document compliance with Conditions D.1.3, D.1.4 and D.1.6 using the forms provided with this permit. These records shall be maintained in accordance with Section C.14 General Record Keeping Requirements of this permit and include a minimum of the following:

- (a) Inspection records for the packed-bed scrubber/composite mesh-pad system, foam

blanket-type fume suppressant, composite mesh-pad system and monitoring equipment to document that the inspection and maintenance required by Conditions D.1.7 and D.1.9 have taken place. The record can take the form of a checklist and should identify the following:

- (1) The device inspected;
  - (2) The date of inspection;
  - (3) A brief description of the working condition of the device during the inspection, including any deficiencies found; and
  - (4) Any actions taken to correct deficiencies found during the inspection, including the date(s) such actions were taken.
- 
- (b) Records of all maintenance performed on tanks HC #1 and HC #2, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, and monitoring equipment.
  - (c) Records of the occurrence, duration, and cause (if known) of each malfunction of tanks HC #1 and HC #2, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad, and monitoring equipment.
  - (d) Records of the occurrence, duration, and cause (if known) of each period of excess emissions of tanks HC #1 and HC #2, the packed-bed scrubber/composite mesh-pad system, foam blanket-type fume suppressant, composite mesh-pad and monitoring equipment as indicated by monitoring data collected in accordance with this condition.
  - (e) Records of actions taken during periods of malfunction or excess emissions when such actions are inconsistent with the OMP.
  - (f) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the OMP.
  - (g) Test reports documenting results of all performance tests.
  - (h) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance.
  - (i) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.
  - (j) The total process operating time, as defined in Condition D.1.8(b), of each tank, during the reporting period.
  - (k) Records of the actual cumulative rectifier capacity of each hard chromium electroplating tank expended during each month of the reporting period, and the total capacity expended to date for a reporting period.
  - (l) All documentation supporting the notifications and reports required by 40 CFR 63.9 and 63.10 (Subpart A, General Provisions) and by Condition D.1.10.

D.1.10 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347] [326 IAC 20-8-1]

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The notifications and reports required in this section shall be submitted to IDEM, OAM and ERMD using the address specified in Section C.15 General Reporting Requirements.

(a) Notifications:

(1) Initial Notifications

The Permittee shall notify IDEM, OAM and ERMD in writing that the source is subject to 40 CFR Part 63, Subpart N. The notification shall be submitted no later than one hundred eighty (180) days after the compliance date and shall contain the information listed in 40 CFR 63.347(c)(1).

(2) A Notification of Compliance Status (NCS) is required each time that the facility becomes subject to the requirements of 40 CFR Part 63 Subpart N.

(A) The NCS shall be submitted to IDEM, OAM and ERMD, and shall list, for each tank, the information identified in 40 CFR 63.347(e)(2).

(B) The NCS for tanks HC #1 and HC #2 shall be submitted to IDEM, OAM and ERMD immediately.

(3) Notification of Construction or Reconstruction

Pursuant to 40 CFR 63.345(b)(1), the Permittee may not construct a new tank subject to 40 CFR 63, Subpart N (including non-affected tanks defined in 40 CFR 63.344(e)) without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM and ERMD. In addition, the Permittee may not change, modify, or reconstruct tanks HC #1 and HC #2 without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM and ERMD.

(A) The NCR shall contain the information identified in 40 CFR 63.345(b)(2) and (3).

(B) A change, modification, or reconstruction of this facility includes any change in the air pollution control techniques, the addition of add-on control devices, or the construction of duct work for the purpose of controlling both existing tanks and non-affected facilities by a common control technique or device [i.e., the addition of duct work to the CMP system].

(C) A complete application to construct new chromium electroplating or chromium anodizing tanks serves as this notification. Likewise, the complete application to modify or reconstruct tanks HC #1 and HC #2 serves as this notification.

(D) Pursuant to 326 IAC 2-1.1-2(a), permission must be received from IDEM, OAM and ERMD before construction, modification, or reconstruction may commence.

(b) Performance Test Results

The Permittee shall document results from the initial performance test and any future performance tests in a complete test report that contains the information required in 40 CFR 344(a).

The Permittee shall submit reports of performance test results as part of the Notification of Compliance Status, described in 40 CFR 63.347(e), no later than forty-five (45) days following the completion of the performance test.

- (c) **Ongoing Compliance Status Report**  
The Permittee shall prepare summary reports to document the ongoing compliance status of tanks HC #1 and HC #2 using the Ongoing Compliance Status Report form provided with this permit. This report shall contain the information specified in 40 CFR 63.347(g)(3).
- (d) Because tanks HC #1 and HC #2 are located at site that is an area source of hazardous air pollutants (HAPs), the Ongoing Compliance Status Report shall be retained on site and made available to IDEM, OAM and ERMD upon request.
  - (1) The Ongoing Compliance Status Report shall be completed according to the following schedule except as provided in paragraphs (c)(2).
    - (A) The first report shall cover the period from the issuance date of this permit to December 31 of the year in which the permit is issued.
    - (B) Following the first year of reporting, the report shall be completed on a calendar year basis with the reporting period covering from January 1 to December 31.
  - (2) If either of the following conditions are met, semiannual reports shall be prepared and submitted to IDEM, OAM and ERMD:
    - (A) The total duration of excess emissions (as indicated by the monitoring data collected by the Permittee in accordance with 40 CFR 63.343(c)) is one percent (1%) or greater of the total operating time as defined in Condition D.1.8(b) for the reporting period; or
    - (B) The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is five percent (5%) or greater of the total operating time as defined in Condition D.1.8(b).

Once the Permittee reports an exceedance as defined above, Ongoing Compliance Status Reports shall be submitted semiannually until a request to reduce reporting frequency in accordance with 40 CFR 63.347(g)(2) is approved.

- (3) IDEM, OAM and ERMD may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### **Facility Description [326 IAC 2-7-5{15}]: Degreasing Operations**

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

- (c) One (1) cold cleaner degreaser, utilizing one (1) gallon of mineral spirits a year, without a remote solvent reservoir, identified as Mineral Spirits;
- (d) One (1) cold cleaner degreaser, utilizing 70 gallons of MEK (2-Butanone) a year, without a remote solvent reservoir, identified as MEK;

### **Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

#### **D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip each cleaner with a cover;
- (b) Equip the cleaners with a emissions unit for draining cleaned parts;
- (c) Close the degreaser covers whenever parts are not being handled in the cleaners;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### **D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]**

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser emissions unit shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreasers with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreasers with a emissions unit for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch)

measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage emissions unit must be internal such that articles are enclosed under the cover while draining. The drainage emissions unit may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreasers with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning emissions unit shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreasers.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

### SECTION D.3

### FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities**

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

- (e) Three (3) natural gas fueled space heaters, with a combined maximum heat input rate of 0.29 million Btu per hour, exhausting to stacks 9, 10, and 8, and identified as Space Heaters;
- (f) One (1) natural gas fueled parts bake oven, with a maximum heat input rate of 0.02 million Btu per hour, identified as Parts Bake Oven;
- (g) One natural gas fueled burner, with a maximum heat input rate of 0.02 million Btu per hour, identified as Burner.

**Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

There are no applicable requirements.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT, COMPLIANCE DATA SECTION  
and CITY OF INDIANAPOLIS  
ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION**

**CHROMIUM ELECTROPLATING NESHAP  
ONGOING COMPLIANCE STATUS REPORT**

Source Name: R&S Plating, Inc.  
Source Address: 2302 Bloyd Ave., Indianapolis, IN  
Mailing Address: 2302 Bloyd Ave., Indianapolis, IN  
Part 70 Permit No.: 097-11695-00325

Tank ID #: HC #1 and HC #2  
Type of process: Hard  
Monitoring Parameter: composite mesh-pad system  
Parameter Value: shall be operated within  $\pm 1$  inch of water column of the pressure drop value established during the initial performance test  
Limits: Total chromium concentration may not exceed .01 mg/dscm

This form is to be used to report compliance for the Chromium Electroplating NESHAP only.  
The frequency for completing this report may be altered by the IDEM, OAM, Compliance Branch and ERMD.

Complete this report no later than 30 days after the end of the reporting period,  
and retain on site unless otherwise notified.

**This form consists of 2 pages  
Page 1 of 2**

BEGINNING AND ENDING DATES OF THE REPORTING PERIOD:

TOTAL OPERATING TIME OF THE TANK DURING THE REPORTING PERIOD:

**MAJOR AND AREA SOURCES: CHECK ONE**

- 9** NO DEVIATIONS OF THE MONITORING PARAMETER ASSOCIATED WITH THIS TANK FROM THE COMPLIANT VALUE OR RANGE OF VALUES OCCURRED DURING THIS REPORTING PERIOD.
- 9** THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES DURING THIS REPORTING PERIOD (THUS INDICATING THE EMISSION LIMITATION MAY HAVE BEEN EXCEEDED, WHICH COULD RESULT IN MORE FREQUENT REPORTING).

**AREA (I.E., NON-MAJOR) SOURCES OF HAP ONLY:**

JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

**HARD CHROME TANKS / MAXIMUM RECTIFIER CAPACITY LIMITED IN ACCORDANCE WITH 40 CFR 63.342(c)(2) ONLY:  
LIST THE ACTUAL AMPERE-HOURS CONSUMED (BASED ON AN AMP-HR METER) BY THE INDIVIDUAL TANK.**

JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC



## CHROMIUM ELECTROPLATING NESHAP ONGOING COMPLIANCE STATUS REPORT

ATTACH A SEPARATE PAGE IF NEEDED

Page 2 of 2

IF THE OPERATION AND MAINTENANCE PLAN REQUIRED BY 40 CFR 63.342 (f)(3) WAS NOT FOLLOWED, PROVIDE AN EXPLANATION OF THE REASONS FOR NOT FOLLOWING THE PLAN AND DESCRIBE THE ACTIONS TAKEN FOR THAT EVENT:

DESCRIBE ANY CHANGES IN TANKS, RECTIFIERS, CONTROL DEVICES, MONITORING, ETC. SINCE THE LAST STATUS REPORT:

ADDITIONAL COMMENTS:

### ALL SOURCES: CHECK ONE

- |   |  |
|---|--|
| 9 | I CERTIFY THAT THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE; AND, THAT THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE. |
| 9 | THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE NOT FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE, AS EXPLAINED ABOVE AND/OR ON ATTACHED.  |

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**AND**

**INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION  
AIR QUALITY MANAGEMENT SECTION  
DATA COMPLIANCE**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>R&amp;S Plating, Inc.</b>
<b>Address:</b>	<b>2302 Bloyd Ave.</b>
<b>City:</b>	<b>Indianapolis</b>
<b>Phone #:</b>	<b>(317) 925-2396</b>
<b>MSOP #:</b>	<b>097-11695-00325</b>

I hereby certify that R&S Plating, Inc. is  
☒ still in operation.    ☐ no longer in operation.

I hereby certify that R&S Plating, Inc. is  
☐ in compliance with the requirements of MSOP 097-11695-00325.  
☒ not in compliance with the requirements of MSOP 097-11695-00325.

<b>Authorized Individual (typed):</b>	
<b>Title:</b>	
<b>Signature:</b>	
<b>Date:</b>	

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>	

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
and  
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION  
AIR QUALITY MANAGEMENT SECTION  
DATA COMPLIANCE**

**MINOR SOURCE OPERATING PERMIT  
SEMI-ANNUAL COMPLIANCE MONITORING REPORT**

Source Name: R&S Plating, Inc.  
Source Address: 2302 Bloyd Ave., Indianapolis, IN  
Mailing Address: 2302 Bloyd Ave., Indianapolis, IN  
MSOP No.: 097-11695-00325

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted semi-annually. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

**9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

<b>Compliance Monitoring Requirement</b> (e.g. Permit Condition D.1.3)	<b>Number of Deviations</b>	<b>Date of each Deviation</b>

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_\_, 100TONS/YEAR CARBON MONOXIDE ?\_\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND  
REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_        AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_        AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

### **326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

### **326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**Indiana Department of Environmental Management  
Office of Air Management  
and  
City of Indianapolis Environmental Resources Management Division**

**Technical Support Document (TSD) for a Minor Source Operating Permit**

**Source Background and Description**

**Source Name:** R & S Plating, Inc.  
**Source Location:** 2302 Bloyd Ave., Indianapolis, IN 46218  
**County:** Marion  
**SIC Code:** 3471  
**Operation Permit No.:** 097-11695-00325  
**Permit Reviewer:** Lisa Adler

The Office of Air Management (OAM) and the City of Indianapolis (ERMD) have reviewed an application from R & S Plating, Inc. relating to the operation of their hard chromium plating operation under a Standard Industrial Classification Code (SIC) of 3471.

**Unpermitted Emission Units and Pollution Control Equipment**

The source also consists of the following unpermitted facilities/units:

- (a) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 17,640,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #1, equipped with a packed-bed scrubber/mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;
- (b) One (1) hard chromium electroplating operation with a maximum cumulative rectifier capacity of 23,520,000 Ampere-hours consisting of: One (1) hard chromium electroplating tank, identified as HC #2, equipped with a packed-bed scrubber/mesh-pad system and a foam blanket-type fume suppressant as controls, equipped with a composite mesh-pad as a common control, and exhausting to one (1) stack, identified as Stack 2;
- (c) One (1) cold cleaner degreaser, utilizing one (1) gallon of mineral spirits a year, without a remote solvent reservoir, identified as Mineral Spirits;
- (d) One (1) cold cleaner degreaser, utilizing 70 gallons of MEK (2-Butanone) a year, without a remote solvent reservoir, identified as MEK;
- (e) Three (3) natural gas fueled space heaters, with a combined maximum heat input rate of 0.29 million Btu per hour, exhausting to stacks 9, 10, and 8, and identified as Space Heaters;
- (f) One (1) natural gas fueled parts bake oven, with a maximum heat input rate of 0.02

million Btu per hour, identified as Parts Bake Oven;

- (g) One natural gas fueled burner, with a maximum heat input rate of 0.02 million Btu per hour, identified as Burner.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
2	Chrome Plating	31.5	1.29	320	85
3	Ventilator	32	Rectangular 0.98 x 1.17	2100	81
4	Ventilator	33	Rectangular	2450	85
5	Ventilator (unused)	18.1	1.0	N/A	N/A
6	Brick Chimney (unused)	36.5	1.58 X 1.58	N/A	N/A
7	Attic Ventilator	33		N/A	N/A
8	Space Heater - office	37.5	0.5	Unknown	Unknown
9	Space Heater - Shipping	13.5	0.33	Unknown	Unknown
10	Space Heater - Shipping	13.5	0.33	Unknown	Unknown
11	Sewer Vent	23	0.25	Unknown	N/A

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on 12/27/1999.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	negligible
PM-10	negligible
SO <sub>2</sub>	negligible
VOC	negligible
CO	0.003
NO <sub>x</sub>	0.1

HAP's	Potential To Emit (tons/year)
Chromium	<10
Methyl Ethyl Ketone (2-Butanone)	0.24
TOTAL	<10

This source is a hard chromium plating source. Therefore, pursuant to 326 IAC 2-6.1-3, a minor source operating permit will be issued.

#### Actual Emissions

No previous emission data has been received from the source.

#### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	maintenance
NO <sub>2</sub>	attainment
Ozone	maintenance
CO	maintenance
Lead	maintenance

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as maintenance attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marion County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.



## Source Status

Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	negligible
PM10	negligible
SO <sub>2</sub>	negligible
VOC	negligible
CO	0.003
NO <sub>x</sub>	0.1
Single HAP	< 10
Combination HAPs	< 25

This source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

## Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) The degreasing units, "Mineral Spirits" and "MEK", are not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14 [40 CFR 63, Subpart T (Halogenated Solvent Cleaning)] because they use mineral spirits and 2-Butanone instead of halogenated solvents.
- (b) Chrome Tanks HC #1 and HC #2 are subject to the National Emission Standards for Hazardous Air Pollutants, (40 CFR 63, Subpart N, and 326 IAC 20). Pursuant to 40 CFR 63, Subpart N, and 326 IAC 20-1-1, the chromium electroplating operations are subject to the following conditions:

(1) **Emissions Limitation:**

The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks HC #1 and HC #2.

- (A) The hard chromium electroplating tanks, identified as HC #1 and HC #2 above, are considered a small, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium

emissions discharged to the atmosphere from the hard chromium electroplating tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed three-hundredths milligrams of total chromium per dry standard cubic meter of ventilation air (0.03 mg/dscm) [equivalent to one and three-tenths times ten raised to the power of negative five grains of total chromium per dry standard cubic foot of ventilation air ( $1.3 \times 10^{-5}$  gr/dscf)].

- (B) Tanks HC #1 and HC #2, are considered existing and non-affected. For these tanks, HC #1 and HC #2, the compliance date is the individual start-up date of the tank.

(2) ***Monitoring Requirements:***

When using a packed bed scrubber in conjunction with a composite mesh-pad system to comply with the emission limit of 0.01 milligram per dry standard cubic meter (mg/dscm), the Permittee shall monitor and record the pressure drop across the composite mesh-pad system during tank operation once each day that the hard chromium electroplating tank is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within  $\pm 1$  inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant values for pressure drop established during multiple performance tests.

Once an exceedance occurs, the frequency of monitoring must revert back to every four (4) hours of tank operation. After forty (40) hours of monitoring tank operation every four (4) hours with no exceedances, surface tension measurement may be conducted once every eight (8) hours of tank operation. Once there have been no exceedances during forty (40) hours of tank operation, surface tension measurement may be conducted once every forty (40) hours of tank operation on an ongoing basis, until an exceedance occurs.

(3) ***Reporting Requirements:***

- (A) A summary report shall be prepared to document the ongoing compliance status of the chromium electroplating operation. This report shall be completed annually, retained on site, and made available to IDEM upon request. If there are significant exceedance of chromium air emission limits (as defined in 40 CFR Part 63.347(h)(2)), then semiannual reports shall be submitted to:

Indiana Department of Environmental Management  
Air Compliance Branch, Office of Air Management  
Chromium Electroplating  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206

- (B) The chromium electroplating operations shall be subject to the record keeping and reporting requirement as indicated in the chromium electroplating NESHAP.

**State Rule Applicability - Entire Source**

326 IAC 2-6 (Emission Reporting)

This source is located in Marion County and the potential to emit VOC and NO<sub>x</sub> is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

### 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 1-6-3 (Preventive Maintenance Plan)

A Preventive Maintenance Plan (PMP) is required for tanks HC #1 and HC #2.

#### 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants)

The potential to emit a single Hazardous Air Pollutant (HAP) will be less than 10 tons per year. The potential to emit a combination of HAPs will be less than 25 tons per year. Therefore, rule 2-4.1 does not apply.

#### 326 IAC 20 (HAPs: Incorporation of Federal Regulations)

Pursuant to 326 IAC 20 the Federal regulations for Hazardous Air Pollutants, 40 CFR 63, Subpart A, are incorporated by reference.

#### 326 IAC 8-3-2 (Volatile Organic Compounds (VOC))

The degreasing operations were constructed after January 1, 1980; therefore, 326 IAC 8-3-2 is applicable.

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip each cleaners with a cover;
- (b) Equip the cleaners with a emissions unit for draining cleaned parts;
- (c) Close the degreaser covers whenever parts are not being handled in the cleaners;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### 326 IAC 8-3-5 (Volatile Organic Compounds (VOC))

The degreasing operations were constructed after July 1, 1990 and are cold cleaners without remote solvent reservoirs; therefore 326 IAC 8-3-5 applies.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the cold cleaner degreasing operation, units "Mineral Spirits" and "MEK", shall comply with the following control equipment requirements:
- (1) Equip the degreasers with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreasers with a emissions unit for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage emissions unit must be internal such that articles are enclosed under the cover while draining. The drainage emissions unit may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreasers with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning emissions unit shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreasers.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

### **Conclusion**

The operation of this hard chrome plating operation shall be subject to the conditions of the attached proposed Minor Source Operating Permit 097-11695-00325.

## Appendix A: Emissions Calculations

### VOC & HAP Emissions From Degreasing Operations

**Company Name:** R&S Plating, Inc.  
**Address City IN Zip:** 2302 Bloyd Ave.  
**Reviewer:** Lisa Adler  
**Date:** 10/02/00

#### VOC:

Compound	Maximum Usage Gal/Day	Density Lbs/Gal	%VOC by weight	Lbs/Day	Tons/Yr
Mineral Spirits	0.003846	6.65	100.00%	0.03	0.00
MEK	0.192	6.76	0.00%	0.00	0.00
Total				0.03	0.00

#### HAPs:

Compound	Maximum Usage Gal/Day	Density Lbs/Gal	%HAPs by weight	Lbs/Day	Tons/Yr
Mineral Spirits	0.003846	6.65	0.00%	0.00	0.00
MEK	0.192	6.76	100.00%	1.30	0.24
Total				1.30	0.24

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MM Btu/hr 0.3 - < 10**

**Company Name:** R&S Plating, Inc.  
**Address City IN Zip:** 2302 Bloyd Ave., Indianapolis, IN  
**Plt ID:** 97-11695-325  
**Reviewer:** LMA  
**Date:** 10/02/00

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.3

2.9

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	13.7	13.7	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.1	0.0	0.0

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton